

Appl. No. 09/995,205  
Amdt. Dated October 22, 2003  
Reply to Final Office Action of August 15, 2003

Attorney Docket No. 81716.0081  
Customer No. 26021

REMARKS/ARGUMENTS:

Claims 6-10, 16, and 17 are amended. Claims 1-17 are pending in the application. No new matter is added. Reexamination and reconsideration of the application, as amended, are respectfully requested.

The present invention relates to a non-radiative dielectric waveguide used in a high-frequency band, such as a millimeter wave band, and more particularly to a non-radiative dielectric waveguide suitably used for a millimeter wave integrated circuit or the like. The invention also relates to a millimeter wave transmitting/receiving apparatus of non-radiative dielectric waveguide type, such as a millimeter wave integrated circuit or a millimeter wave radar module. (Applicants' specification, at p. 1, first paragraph).

Applicant believes the following amendments comply with requirements of form and thus may be admitted under 37 C.F.R. § 1.116(a). Alternatively, if these amendments are deemed to touch the merits, admission is requested under 37 C.F.R. § 1.116(b). In this connection, these amendments were not earlier presented because they are in response to the matters pointed out for the first time in the Final Office Action.

Lastly, admission is requested under 37 C.F.R. § 1.116(a) as presenting rejected claims in better form for consideration on appeal.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103:

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Saitoh (U.S. Patent No. 5,864,782). The Applicant respectfully traverses this rejection. Claim 1 is as follows:

A non-radiative dielectric waveguide comprising:  
a pair of parallel planar conductors arranged at an interval of  
half or below of a high-frequency signal wavelength; and

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a dielectric strip interposed between the parallel planar conductors, the dielectric strip having a 0.01 to 0.3 mm-wide chamfer formed at an edge portion in a transmission direction of the dielectric strip;

wherein a surface of each parallel planar conductor adjacent to the dielectric strip is planar.

Applicant respectfully submits that Saitoh cannot render claim 1 obvious because Saitoh fails to teach or suggest "a pair of parallel planar conductors ... wherein a surface of each parallel planar conductor adjacent to the dielectric strip is planar." The Office states, "One skilled in the art, at the time, of the invention would have found it obvious for the surface of the parallel planar conductor adjacent to the dielectric strip to be planar. Saitoh states in column 7, lines 54-62; the present invention is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the invention as hereafter claimed. The scope of the following claims is to be accorded the broadest interpretation so as to encompass all such modifications, equivalent structures and functions. Therefore, one skilled in the art would have found it obvious for the surface of the parallel planar conductor adjacent to the dielectric strip to be planar."

In response, the Applicant respectfully submits that having the surface of the parallel planar conductor adjacent to the dielectric strip be planar is not an equivalent arrangement included within the spirit and scope of Saitoh's invention and consequently, one skilled in the art would have not have found it obvious. In Saitoh, the sharp corners in the conductor and the dielectric in the propagation area have been modified to have a curved or chamfered shape. (Saitoh, column 7, lines 40-46; Figures 7A, 7B). Saitoh states, "Since the portion of the dielectric which forms the ridge of the dielectric projecting into the conductor in the propagation area is formed with chamfered or curved corners, the concentration of an electric

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current in that portion can be suppressed, and transmission loss can be reduced." (Saitoh, column 7, lines 46-51). Consequently, Saitoh teaches the use of non planar conductor surfaces adjacent to the dielectric strip allows transmission loss to be reduced. Since Saitoh is advocating the use of non planar surfaces, the Applicant respectfully submits that planar surfaces are not within the spirit and scope of Saitoh's invention. Furthermore, Saitoh's use of non planar surfaces teaches away from the present invention.

In light of the foregoing, Applicant respectfully submits that Saitoh could not have made claim 1 obvious, because Saitoh does not teach or suggest each and every claim limitation. Claims 2 and 3 depend from claim 1 and cannot be made obvious for at least the same reasons as claim 1. Withdrawal of these rejections is thus respectfully requested.

Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Saitoh (U.S. Patent No. 5,864,782) in view of Fujimaru et al. (U.S. Patent No. 5,246,898). The Applicant respectfully traverses this rejection. Claim 4 is as follows:

A non-radiative dielectric waveguide comprising:  
a pair of parallel planar conductors arranged at an interval of half or below of a high-frequency signal wavelength; and  
a dielectric strip interposed between planar surfaces of the parallel planar conductors, the dielectric strip being made of a ceramics having an open pore ratio of 5 % or less;  
wherein a surface of each parallel planar conductor adjacent to the dielectric strip is planar.

As discussed above, Saitoh does not teach or suggest "a pair a of parallel planar conductors ... wherein a surface of each parallel planar conductor adjacent to the dielectric strip is planar." Fujimaru cannot remedy the defect of Saitoh and is

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not relied upon for the Office for such. Instead, the Office cites Fujimaru for teaching "a ceramic having open pore ratio being 7% or less." Therefore, the combination of Saitoh and Fujimara cannot render the claimed invention obvious.

Claim 5 depends from claim 4 and cannot be made obvious for at least the same reasons as claim 4. Withdrawal of these rejections is thus respectfully requested.

ALLOWABLE SUBJECT MATTER:

The Office objected to claims 6-17 as being dependent upon a rejected base claim, but states that the claims "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." In response, Applicant rewrote claims 6-10 in the manner suggested by the Office. Withdrawal of this objection and allowance of claims 6-10 is thus respectfully requested.

Claims 11, 12, 13, 14, and 15 depend from claims 6, 7, 8, 9, and 10, respectively, and are patentable for at least the same reasons as amended claims 6-10. Withdrawal of this objection and allowance of claims 11-15 is respectfully requested.

Applicant rewrote both multiple dependent claims 16 and 17 to depend from claims 6-15 instead of claims 1-15. Withdrawal of this objection and allowance of claims 16 and 17 is respectfully requested.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los

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Angeles, California telephone number (213) 337-6810 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

HOGAN & HARTSON L.L.P.

Date: October 22, 2003

By:

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